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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/066,173

01/30/2002

Clinton S. Hartmann

RFSC-0005

2725

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7590

03/31/2004

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EXAMINER

ODLAND, DAVID E

ART UNIT

PAPER NUMBER

2662

[Handwritten initials]

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,173

Applicant(s)

HARTMANN, CLINTON S.

Examiner

David Odland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The following is a response to the amendments filed on 01/24/2004.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-10 recite a "...propagated signal..." in the preamble. A 'propagated signal' is not a process, machine, manufacture or composition of matter and is therefore non-statutory subject matter.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5-13 and 15-20, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Ueno et al. (USPN 3,767,855), hereafter referred to as Ueno.

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Referring to claims 1 and 11, Ueno discloses a propagated signal (a signal is modulated for transmission through a communications system (see abstract and column 1 lines 1-64)), comprising:

an element of data contained within a time period of said propagated signal (data bits represented by pulses are contained within a time period of a frame (see figures 1A-1D and column 1 lines 1-64)), said time period divided into a group of time slots (a frame spans multiple time periods, T1, which are divided into time slots 0-7 for each time period (see figure 1B)); and

multiple pulses distributed in a predetermined manner among said time slots by pulse group keying to encode said data (several words of a frame overall comprise multiple pulses (i.e. one pulse per word) and are encoded using pulse position modulation (PPM), wherein the frame is denoted by a frame synchronization pulse Pf (see figure 1D and column 1 lines 60-64)). Note it appears as though the Ueno reference has a typographical error since in column 1 lines 60-64, Ueno discloses that frame synchronization word Pf is to replace the word synchronization pulse Pw, but figure 1D still shows Pw, therefore Pw should be interpreted as Pf.

Referring to claims 2 and 12, Ueno discloses the system discussed above. Furthermore, Ueno discloses that the data is ascertainable by mapping (inherently, at the receiving end of the transmission the PPM encoded signal is mapped back to a digital signal so that it can be processed (see abstract and item 112 of figure 2B)).

Referring to claims 3 and 13, Ueno discloses the system discussed above. Furthermore, Ueno discloses that the time slots in said group are adjacent (the time slots in Ueno are adjacent (see figure 1B)).

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Referring to claims 5 and 15, Ueno discloses the system discussed above. Furthermore, Ueno discloses that the time slots have differing characteristics (the time slots have different numbers (i.e. 0 through 7) (see figure 1B)).

Referring to claims 6 and 16, Ueno discloses the system discussed above. Furthermore, Ueno disclosed that the data that is more than fifteen bits long is encoded in said group (more than fifteen bits are encoded (see figure 1A). Note, figure 1A only shows 9 bits being encoded but that is because this is only a snapshot of an example of the encoding process. The bits are a stream that would have to be more than 15 bits, since it would not make sense to devise a communication system that only encodes 9 bits.

Referring to claims 7 and 17, Ueno discloses the system discussed above. Furthermore, Ueno disclosed that the element of data is selected from the group consisting of a header, an error detection message, a synchronization element and a data message (the data is message information from a transmitter (see column 1 lines 1-64)).

Referring to claims 8 and 18, Ueno discloses the system discussed above. Furthermore, Ueno disclosed a plurality of said time periods (the PPM words are divided into a plurality of frames for transmitting the data (see figures 1A-1D and column 1 lines 1-64)).

Referring to claims 9 and 19, Ueno discloses the system discussed above. Furthermore, Ueno disclosed that the time periods have differing numbers of multiple pulses (a differing number of pulses can exist within a frame since the number of words in a frame can vary (see figure 1A-1D)).

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Referring to claims 10 and 20, Ueno discloses the system discussed above. Furthermore, Ueno disclosed that the number of time slots vary in said time periods (the number of time slots can vary based on the value of N in 2^N (see column 1 lines 30-39)).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4 and 14, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno in view of Austin (USPN 6,236,855), hereafter referred to as Austin.

Referring to claims 4 and 14, Ueno discloses the system discussed above. Ueno does not disclose that the time slots are not adjacent. However, Austin discloses a system wherein stations utilize non-adjacent time slots for communicating, thereby preventing or reducing channel interference. Therefore, it would have been obvious to one skilled in the art at the time of the invention to utilize timeslots that are not adjacent in the Ueno system because doing so would aid in preventing inter channel interference.

Response to Arguments

7. Applicant's arguments filed 01/23/2004 have been fully considered but they are not persuasive.

On page 6, regarding the 35 USC 101 rejections of claims 1-10, the Applicant argues that there is no reason to amend the claim to overcome this rejection because it is the apparent policy of the Office to allow claims directed to a 'propagated signal'. The Applicant also cites claims 31 and 32 from U.S. Patent number 6,670,969 as containing such claims. The Examiner respectfully disagrees. Prosecution of the instant application is based on its own merits. Prior actions of the Office that may be inconsistent with present examination policy is not binding on the present application. The current Office policy is such that whoever invents any new and useful *process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent*, as required by 35 U.S.C. 101. In this case, a 'propagated signal' is not a process, machine, manufacture or composition of matter nor is it an improvement thereof and so it is therefore non-statutory subject matter.

On page 8 regarding the 35 USC 102 rejection of claim 1-3,5-13 and 15-20 the Applicant contends that Ueno does not describe using multiple pulses to encode data in multiple time slots within a single word of defined group of time slots. The Examiner respectfully disagrees. Firstly, the claim does not recite that the multiple pulses are used to encode *a single word* (emphasis added). The claim limitations merely recite that multiple pulses are distributed among a group of time slots that are within a time period. Ueno does indeed disclose such a configuration and it appears as though the Applicant may have inadvertently misinterpreted the Examiner rejection. As such, a clearer explanation of the rejection is given below. Namely, Ueno discloses dividing up the data to be transmitted within frames, wherein each frame comprises multiple words and wherein each word is represented by a corresponding pulse and each pulse takes up one particular time slot (see figure 1). Therefore, multiple pulses (i.e. one

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pulse for each word of the frame) are distributed among a group of time slots (i.e. one frame comprises the time slots of multiple words and the multiple pulses are distributed among these multiple time slots of the frame as a whole), within a time period (each frame exists for a particular time period, so if there are three words in a frame and 8 time slots are used for each word, then the frame comprises a total of 24 time slots and will have a total three data pulses, each corresponding to a particular one of the three words of the frame), as recited in the claims. In light of the above discussion, Ueno anticipates the claimed invention.

On page 9 and 10 regarding the 35 USC 103 rejections of claims 4 and 14, the Applicant argues that since Ueno does not disclose the limitations of the parent claims 1 and 11, Ueno therefore does not anticipate claims 4 and 14. However, since Ueno does anticipate claims 1 and 11, as discussed above, the rejections to claims 4 and 14 are also proper. Furthermore, the Applicant argues that Austin does not teach distributing multiple pulses within a group of time slots. However, as shown in the above discussion, this limitation is met by the Ueno reference.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action. .

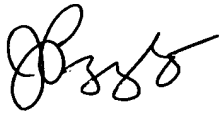
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Odland, who can be reached at (703) 305-3231 on Monday – Friday during the hours of 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached at (703) 305-4744. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist, who can be reached at (703) 305-4750.

deo

March 25, 2004


JOHN PEZZLO
PRIMARY EXAMINER